241 threshing of millet is done on the village threshing floor, facing west.

Attempts have been made to substitute the plow for the hoe, but with indifferent success, for deep plowing of these fragile soils brings the laterite bed of the subsoil to the surface, resulting in the final ruin of the fields.

The Bambara have no organic fertilizer other than household wastes, except in some regions where the shepherds lead their flocks onto the stubble after the harvest. Although only superficially worked, the soils are quickly exhausted and must be abandoned after a few years. Clearing the land by brush fire has the drawback of progressive deforestration.

E. Production Statistics

241 433 As statistics are established by circles or by administrative centers, it is impossible to give precise figures on the volume of agricultural production which may be attributed specifically to the Bambara. However, since the Bambara constitute the vast majority of the population in certain circles, it is not without interest to furnish some figures on Sudanese agriculture. It must be pointed out, however, that the acreage under cultivation in the country cannot be estimated even approximately. The statistics established by the circles or administrative centers are founded on approximations so vague that it is not even reasonable to take them into consideration.

As an indication of this, we may cite the figures furnished by the administration of the Bougouni circle. The estimates are calculated on the probable number of workers in a region, to each of whom is attributed a field of theoretical acreage. Three-fourths of the production is assigned to millet and the rest to regional crops. The average yields per hectare calculated in this manner may give a probable indication of the quantity harvested, but they cannot be verified in any manner.

Production According to "Le Guide A.O.F. (1950)"
[The French West African Guidebook]

Bamako

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Export Products -- Karite, peanuts, 11,700 M.T. [metric tons]; sisal, 300 M.T.; cotton, 20 M.T.; tobacco, 35 M.T.

Food crops -- Millet, 92,256 M.T.; maize, 11,200 M.T.; rice, 4,917 M.T.; fonio, 200 M.T.; yams, 1,000 M.T.; manioc, 2,600 M.T.; potatoes, 1,506 M.T.; sweet potatoes, 3,810 M.T.; beans and onions, 15,200 M.T.; peas, 8,420 M.T.

[34] Ségou

Exports -- Peanuts, 10,000 M.T.; rice, 6,000 M.T.; kapok, 600 M.T.; karite almonds, 1,000 M.T.; butter, 100 M.T.; gum, 20 M.T.

Production of the Niger Office -- Rice, 10,000 M.T.; cotton, 1,300 M.T.

Food crops -- Millet, 15,400 M.T.; maize, 1,000 M.T.; fonio, 4,200 M.T.; peas, 2,600 M.T.; beans, 1,600 M.T.

Bougouni

Exports -- Karite butter, 100 to 600 M.T.; peanuts, 500 M.T.; millet, 1,000 M.T.; wax.

Food crops -- Millet, 40,000 M.T.; fonio, 10,000 M.T.; rice, 6,000 M.T.; maize, 5,000 M.T.; peanuts, manioc, yams, sweet potatoes. (Charts on following pages.)

II. Animal Husbandry

A. Methods of Stock Raising

439 The Bambara are a sedentary, agricultural people; they have a symbiotic relationship with the Somono and Bozo, who are fishermen and sailors exclusively, and with other semi-nomadic peoples like the Peul who are shepherds.

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Production figures
furnished by the Bougouni circle for the year 1950

Crop	Area planted	Average yield per hectare in metric tons	Quantities harvested in metric tons	Metric tons needed for seed	For Food	Available for sale
Millet	60,000	0.500	30,000	1,200	27,000	2,000
Rice	1,500	0.700	1,000	100	800	100
Peanuts	2,500	0.600	1,500	150	350	1,000
Maize	4,000	0.700	2,800	50	2,750	
Fonio	1,000	0.700	700	100	600	
Manioc, sweet potatoes, yams	300	2.000	600		600	
Beans and peas	100	0.800	80	10	70	

Area cultivated . . 69,400

3: ?Raques--42 S-4 (no date) 1954 FA8 Bambara FA8

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Industrial Crops

Crop	Hectares planted	Average yield per hectare	Quantities harvested in metric tons	Local Consumption	Seed	Available for sale
Peanuts	2,500	0.600	1,500	150	350	1,000
Native cotton	500	0.150	75	75		
"N'Courala" cotton	60	0.200	12			
Tobacco	750	0.400	300	150		150
Dah[sic], sisal	insignificant					

The Société de Prevoyance [Welfare Society?] has stocked 600 groves with mango trees, cailcedra, and poincianas.

3; Paques--43 S-4 (no date) 1954 FA8 Bambara FA8

C. Statistics

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	Sheep Goats	Bovines	Horses	Asses
Bamako	64,987	49,425	6,227	10,356
Ségou	234,645	161,965	10,454 -5,165	12,159
Bougouni	17,360	29,197	431	1,651

Estimates for the three Bambara centers.

D. Products from Livestock

253 Meat -- The principal slaughtering centers are Bamako and Kayes.

439 Some of the available bovines are exported to Senegal. This is done from the Kayes circle by way of the routes: Néma, Timbesa, Nioro, Kayes; or Néma, Nara, Yelamano, Kayes. Others are sent to Guinea to provide meat for the workers in the gold placers of the Siguiri region. Some go to the Ivory and Gold Coasts, where the animals are sent chiefly from Mopti, with participation from the circles [487] of Ségou, San, and Niafunké. Numerous caravan routes penetrate to the Ivory Coast by way of Odienné, Seguela, Korhogo, Bouaké, and Boho-Dioulasso.

[255] Preserves are made in the factories of Lyndiane.

281 Leather -- Leather comes either from the slaughter houses or from the bush. It is of mediocre quality because of poor preparation: the skins are dried in the sun, folded in two lengthwise, hair against hair, and tied together with a wire, ten to a bundle. About 600 metric tons pass through Bamako annually.

234 Milk and milk derivatives -- The cows are poor producers; most of the milk is furnished by the Moorish, Peul, and Toronké zebus. Butter production is primitive: the sour milk is put in calabashes, cans, or goat skins and shaken until it turns to butter. At Falaladji near Kayes there is a butter and cheese factory.

236 439 Wool -- The wool is generally used locally for weaving; only a small percentage is exported to France. A great effort has been

463 make tools, farming implements in current use, furnishings, orna-
326 mental objects, bracelets, different kinds of rings. They also work gold and silver to make jewelry in filigree.

462 Weaving and basket-making are not done by the people of
286 caste, but by all men, or, formerly, by their house captives.
285 Primitive looms, worked by treadles, are set up outside of the houses in the shade of the trees. The men weave long bands of cotton for making clothes, loin-cloths, and blankets. These bands, several meters long, are sometimes made into rolls weighing as much as 30 kilograms and are carried off to market by the diula [531] (itinerant merchants). The Bambara practice dyeing, batik, and embroidery (done by the men).

433 All this industry remains of strictly local interest and is directed solely toward meeting the immediate needs of the community.

c. Division of Labor

462 The Bambara are essentially an agricultural people. Never-
857 theless, as all members of the society must contribute a certain amount of work to the community, the nature of this work varies according to the social classes and according to whether a man, a woman, or a child is involved. The following tables indicate how the work is divided.

1. Distribution of tasks according to A. Aubert.

Men	Women	Children	All
	Foodstuffs		
	Preparation of food and dolo (beer)		
	Sale of dolo		
Preparation of hives, setting them, gathering the honey	Bottling and sale of honey	Helping	

177 order to cultivate peanuts, sunflowers, millet, and cotton. Every
241 three years, the company distributes green manure crops in order to
473 reconstitute the soil's humus. Moreover, the company has created veritable villages to house its technicians and the colonists.

177 Other organizations, such as the Niger Office, have charge
241 of the basic water control of the central delta (dams, large canals).
312 Thanks to the creation of a network of waterways, to the clearing
433 and de-stumping of lands, and to the development of general equipment (processing factories, workshops, stores, dwellings, road network), the end of 1949 saw 11,000 hectares of rice fields, with a yield of 18 quintals of paddy and a commercial production of 8,000 metric tons of husked rice. Six thousand hectares have been prepared either for growing cotton (2,000 hectares), for growing rice for food (1,000 hectares), or for lying fallow (3,000 hectares). These fields
[166] permit the exportation of 360 metric tons of cotton fiber. Twenty-two thousand persons have been settled as colonists. Finally, let us note that the F.I.D.E.S. by its financial support has permitted the development of peanut cultivation in Senegal, of rice in Guinea and the Sudan, of karite in Upper Volta, as well as the creation of several technical schools.

c. Social Consequences

177 This technical evolution has profound repercussions on the
596 native way of life. We notice the same change in the Bambara
241 peasant as in the Bambara artisan. The large united family which was [78] the cornerstone of agricultural technique tends to split up more and more, even in the regions where the traditional farming methods are still used. The family field, a great deal less carefully tended than in the past, gives way in importance to the individual's field. Moreover, the family field traditionally was at the end of a path bordered by small individual fields where each peasant went to work for himself before and after the collective labor. Today, we see the creation of individual fields in the brush far from the path which leads from the village to the family field, clearly indicating the desire of the individual to separate himself from the large family and to escape the control of the farming chief in order to realize personal benefits for himself, not subject to family inspection.